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ABSTRACT

This paper reviews some of the observations made by Vygotsky about the structure and content of inner speech and its precursor egocentric speech, also called private speech. Recent advances in certain areas of linguistics are used to clarify and develop these observations. In particular, the paper focuses on Vygotsky's ideas about the predicative structure of private and inner speech. It is observed that Vygotsky consistently analyzed predicativity in private and inner speech by using notions similar to those used in functional linguistics, and that he recognized the difference between grammatical subject and predicate and psychological subject and predicate. A further distinction was made by Vygotsky between psychological subject and psychological predicate This distinction is compared at length with the distinction made by Chafe between given and new information in social speech. A new version of Chafe's definitions of given and new information is proposed to be applicable to private speech rather than social speech. The developmental hierarchy of private speech suggested by Kohlberg and others is discussed. An analysis is made of the surface form of the private speech of two 2-year-olds who were assembling a puzzle. It is concluded that: (1) private speech has a given-new information organization based on what is already present and what is introduced into the child's consciousness, and (2) this organization is based on the child's action. (SB)

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INNER SPEECH REVISITED

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One of Vygotsky's most interesting contributions to the study of the relationship between speaking and thinking was in the area of private speech.[1] He described it as speech in which "the child talks only about himself, takes no interest in his interlocutor, does not try to communicate, expects no answers, and often does not even care whether anyone listens to him." (1962:15) Due to his early death Vygotsky did not have the chance to develop all the implications of his ideas for developmental and cognitive psychology. The few studies he conducted on private speech supported his basic notions that it arises out of social speech and that it has a cognitive function. These data have since been supplemented by studies in the West (e.g. Kohlberg, Yaeger, and Hjertholm 1968) that further corroborate his hypotheses about these two aspects of private speech.

Vygotsky claimed, however, that private speech has additional properties as well. These properties are primarily concerned with its content and structure and allowed Vygotsky to outline a theory in which private speech is the precursor of inner speech. He pointed out in several places that the structure and content of inner speech should differ in fundamental ways from that of external socially-oriented speech. Inner speech could not fulfill the cognitive planning and directing roles in the way Vygotsky outlined if it were simply a subvocal version of full-fledged external speech. Therefore, he developed several ideas about the properties of inner speech and predicted that they would begin to appear in the child's private speech. He hypothesized that inner speech possesses three semantic characteristics: agglutination, the preponderance of sense over meaning, and the influx of sense. While these three characteristics are certainly of interest in a complete analysis of his ideas, we shall focus our

attention here on Vygotsky's notions about what he called the main syntactic characteristic of private and inner speech - its predicative structure. The rest of this paper will be concerned with analyzing what Vygotsky had in mind when he said that private speech is predicative and what some of the factors are that contribute to this structural characteristic.

Although Vygotsky was interested in making predictions about the content and structure of inner speech, his work in this area was limited to hypotheses and insightful analogies. The only actual evidence he used in his work came from private speech. Since inner speech is by definition not accessible for analysis, this is the only kind of directly observable evidence we can have for such studies.[2]

In connection with his claim that the predicative syntax of inner speech begins to manifest itself in private speech, Vygotsky said that as private speech develops:

> it shows a tendency toward an altogether specific form of abbreviation: namely ommitting the subject of a sentence and all words connected with it while preserving the predicate. This tendency toward predication appears in all our experiments with such regularity that we must assume it to be the basic syntactic form of inner speech. (1962:139)

When trying to understand Vygotsky's ideas about the syntax of private and inner speech, it quickly becomes evident that he was concerned more with a functional than a structural linguistic analysis of predicativity. While it is true that the best translation of the term he used in Russian (predikativnost') is "predicativity," he was actually concerned with notions that have subsequently been developed in functional linguistics such as given and new information, topic and comment, or theme and rheme rather than with the syntactic or grammatical subject and predicate. In this regard it is important to note that Vygotsky said nothing about nouns and verbs when speaking of predicativity.

Besides the fact that Vygotsky consistently analyzed predicativity in private and inner speech by using notions similar to those used in functional linguistics, there is additional evidence that he had a functional definition in mind. Specifically, he recognized the difference between grammatical subject and predicate on the one hand, and what he called psychological subject and predicate on the other. One should not be surprised that he included the psychological subject and predicate in his analysis since Russian and Soviet linguists have traditionally been very concerned with psychological and social factors.

In order to understand how Vygotsky's notions of psychological subject and predicate play a role in private speech we need to distinguish them clearly from their grammatical counterparts. The notions of grammatical subject and predicate have usually been interpretted strictly in terms of surface syntax. For example, factors such as gender, number, and case agreement between a noun phrase and a verb are generally accepted as means for identifying the grammatical subject. Although Chafe (1976) has recently suggested that the notion of subject of a sentence might also play an important cognitive role, we shall identify grammatical subject and predicate here strictly on syntactic grounds since this is what Vygotsky seemed to have in mind.

On this basis, we can say that in the case of English, the subject: a) is a noun phrase that occurs before the verb phrase in declarative clauses and immediately after the auxiliary or operator in interrogative clauses, and b) has number and person agreement, where applicable, with the verb phrase. As Quirk, Greenbaum, Leech, and Svartvik (1972) point out, it is much more difficult to define the grammatical predicate of a sentence because it is a

more complex and heterogeneous unit. For our purposes it will suffice to point out that the predicate traditionally consists of units such as the verb (including auxiliaries), complement, object, and adverbial.

Although several problems with these definitions arise if one pushes them far enough, for purposes of contrast with psychological subject and predicate, they work tolerably well. On the basis of these definitions we can say that "John" serves as the grammatical subject in (1) and (3), whereas "He" does in (2).

(1) John repaired the rocking chairs.

(2) He repaired the rocking chairs.

(3) John did it.

Note that our definition of grammatical subject and predicate should not be confused with semantic notions like agent since in sentence (4), "John" still is the agent as in (1) and (3), but "rocking chairs" is the grammatical subject.

(4) The rocking chairs were repaired by John.

Whatever their weaknesses may be, our description of grammatical subject and predicate will suffice since their only purpose is to identify a distinction Vygotsky was not using when he referred to predicativity in private and inner speech. One fact to keep in mind when trying to distinguish psychological from grammatical subject and predicate is that with the latter, communicative context plays no role in determining the organization of the sentence. The same words serve as grammatical subject and predicate regardless of how the sentence is used. We shall see that communicative context factors can determine which words in an utterance will be the psychological subject and predicate.

What did Vygotsky have in mind when he used the notions of psychological

subject and predicate? When dealing with the psychological subject, he said it is what the phrase "is about" and what is "in the listener's consciousness first." His examples indicate that when he talked about what is in the listener's consciousness first, he was referring to information that was in the listener's consciousness before hearing a particular utterance which adds to that information. With regard to the psychological predicate, he said it is "what is new," "what is said about the (psychological) subject." (1956:324) It turns out that this distinction between psychological subject and predicate is very similar to the type of distinctions first introduced into modern linguistic analysis by Prague School linguists such as Firbas (1966). Subsequently, many of these ideas have been analyzed more closely and redefined. This has resulted in a proliferation of terms and distinctions. One of these distinctions that is now widely accepted is that between given and new informaiton (Halliday 1967, Chafe 1974,1976). Chafe defines it as follows:

> Given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance. So-called new information is what the speaker assumes he is introducing into the addressee's consciousness by what he says. (1976:30)

Note that like Vygotsky, Chafe uses the notion of consciousness in his definition of this distinction. In fact, Chafe says that "The key to this distinction is the notion of consciousness." (1976:30) Both in Vygotsky's and Chafe's analyses the state of a listener's consciousness can only be determined on the basis of facts about a particular communicative context. These striking similarities lead us to conclude that Vygotsky's distinction between psychological subject and predicate is essentially the same distinction that Chafe has made between given and new information.

In addition to the distinction between given and new, Chafe outlines several other ways of analyzing the "packaging" of a sentence. Some of these correlate highly with the given-new distinction, but he has shown that These should not be confused with it since they can occur independently. He points out that in particular, contrastiveness has often been confused with new information but is a separate phenomenon. This is evident from the fact that a contrastive item can carry given, rather than new, information.

Chafe points out that the portion of an utterance which conveys given information is characterized by lower pitch, weaker stress, and a tendency for nouns to be pronominalized. These properties, in addition to an analysis of the communicative situation, can often be used to identify which part of a sentence is being used in each of the two capacities. The way in which the sentence fits into the communicative context determines which part of a sentence will be associated with the given and new information. This means that the parts of a sentence assigned to these two categories may not always be the same. One and the same sentence with a single assignment of grammatical subject and predicate can be broken down into different segments of given and new information when it is used to make different utterances.

For example, if we return to our original sentence (1), we see that either the grammatical subject or the grammatical predicate can convey the given or the new information.

(1) John repaired the rocking chairs.

If two people are talking about John, we can assume that the notion of John is in the consciousness of both people. Therefore, it is the given information

in this case. If A uses (1) in an utterance to B, then repairing the rocking chairs would probably be the new information about John for B.[3] In this case, the grammatical and psychological organizations coincide. In such a communicative context, "John" would normally receive lower pitch and weaker stress. It is also likely that it would be pronominalized as in (2).

On the other hand, if A and B are discussing rocking chairs that have been repaired and if A uttered (1) to B, then "John" would probably carry the new information. It is the information introduced into B's consciousness. In this situation it would be reasonable for A to assume that the notion of repairing rocking chairs is already present in B's consciousness. The grammatical subject contains the new information (i.e. Vygotsky's psychological predicate), and the grammatical predicate contains the given information (i.e., Vygotsky's psychological subject). Although Chafe points out that pitch and stress for given and new information is more difficult to analyze in the case of verbs than for nouns, one would expect that the segment "repaired the rocking chairs" in (1) would receive less emphasis on both these counts than in the first communicative context we outlined. Coversely, that part of the sentence which conveys new information - "John" - would receive higher pitch and greater stress. Although Chafe did not deal with substitution for verbs as he did with pronominalization in the case of nouns, we can safely conclude that because of the given-new organization of the information, (3) would be an acceptable sentence to use in the second communicative setting, but not in the first.[4]

So far we have dealt with the notions of given and new information and grammatical subjects and predicates as they are analyzed in communicative interchanges involving at least two people. For instance, Chafe's analysis of

what is new involves what one person (the speaker) is introducing into the consciousness of another person (the listener). When Vygotsky speaks about private speech becoming abbreviated by dropping psychological subjects (i.e., given information), we are faced with a different situation. We are now trying to apply a distinction developed on the basis of two-person communicative interaction to a problem in which only one person is involved. It is no longer the case that one party (the speaker) can introduce new information into the consciousness of another (the listener). While it is true that in Vygotsky's theoretical framework the planning and directing function private speech fulfills is formerly carried out with the help of a second person (usually an adult), this function later is taken over by the child. To use Vygotsky's words, this planning and directing function has moved from the interpsychological to the intrapsychological plane. At the point where the child is using private speech to carry out planning, are we to assume that there must be a speaker and a listener with two separate consciousnesses?

Kohlberg et al. (1968) suggest that at one point in the developmental hierarchy of private speech (Level III, type 4 - "Questions answered by the self"), we could expect to find some form of "interpersonal" discourse. Their hypothesis was based on Mead's (1934) notions about how the self emerges out of social interaction. However, they found very few instances of this type of private speech in their data. Even if utterances of this type were more frequent, we are still left with the problem that at some point, the development of private and inner speech will supposedly reach a stage where interpersonal discourse no longer should be the prevalent form. This means that we are once

again in a position of analyzing the predicativity of private and inner speech where there is only one person's consciousness involved. Unlike the case that Chafe outlines where a speaker "packages" utterances on the basis of what he assumes to be given in the listener's consciousness, we are faced with the case in private speech where some other factors must determine what is in the "speaker's" consciousness and what is to be introduced into it as new information.

How are we to analyze the predicative nature of private speech if we no longer can rely on what is in the consciousness of two separate individuals - a speaker and a listener? What I propose is that in trying to understand the given-new structure in children's private speech, we should base our analysis on the child's action rather than on social interaction with another person. When trying to understand how this will work, it is important to keep in mind that we have already determined that the given-new organization of an utterance in social speech is governed by contextual factors. It is not inherent in the sentence structure used. We are claiming that the given-new organization of private speech is also contextually determined. However, the factors used to assign what is given and what is new information are different than in the case of social speech.

With this change in mind, the first thing we need to do is to develop a new version of Chafe's definitions of given and new information which will be applicable to private speech. This definition might read as follows:

> In the case of private speech, given information is that knowledge that is in the speaker's consciousness at the time of the utterance. So-called new information is what is being introduced into the speaker's consciousness.

We might label this the "agnostic" definition since we have modified Chafe's

definition mainly by removing any mention of what contextual factors will be resppnsible for introducing new information into consciousness. By examining certain aspects of the structure and function of private speech, we shall hopefully be able to reintroduce the contextual factors that govern its given-new organization.

Before going on to analyze these factors, we should take a moment to examine the surface form of private speech. Chafe claims that in social speech the part of the utterance which conveys given information receives lower pitch, weakened stress, and may be pronominalized, whereas that part of the utterance which conveys new information is treated in the opposite manner. This tendency toward greater emphasis on those parts of the utterance conveying new information and less emphasis on those parts of the utterance conveying given information may be carried to its logical extreme in private speech. In this case the only thing to be vocalized is new information, and the parts of an utterance which would have conveyed given information are dropped entirely. In Vygotsky's terms, the external form of private speech is reduced to the point where the psychological subject (i.e., given information) is omitted and only the psychological predicate (i.e., new information) is preserved.

The term "action" as it is used here comes from A.N. Leont'ev's theory of activity (1959,1972,1975). Basically, an action is a segment of behavior directed toward a particular goal. The behavior may be internal or external; the segment may form one uninterrupted sequence, or other actions may be embedded in it; and the individual may or may not be conscious of the goal. The notions of an action and its connected goal are found at one of the three levels

of abstraction Leont'ev uses in his theory. It is intermediate in a hierarchy between the notion of an activity and its motive and the notion of an operation and its associated conditions. The theory of activity with its concept of an action plays an extremely important role in Soviet psychology. Almost all of its aspects were originally developed by Vygotsky, although it has been refined and extended by his students such as A.N. Leont'ev and A.R. Luria. When Vygotsky dealt with thinking and how it is guided by private and inner speech, he was primarily concerned with thinking that can be interpretted on the basis of actions. That is, when he talked of the planning and directing role of private and inner speech, he was interested in how these sign systems are used to plan and direct actions which are defined in terms of the goals toward which they are directed.

Before the child reaches the point where he has fully developed this planning, he goes through a series of stages in which his behavior is heavily influenced by environmental input rather than the self-initiated planning and directing necessary for carrying out well formulated actions. During these early stages, what starts out as an action directed toward a goal may be interrupted by any one of a number of outside influences. Observations of the child's speech at this point indicate that private speech has not yet taken on its directive function. Rather, the child seems to be simply describing or naming what he is doing. He is not using private speech to plan his action before carrying it out. Vygotsky describes this early form of private speech as being a part of the child's behavior rather than a separate planning and directing system. This transition from the point where private speech accompanies and describes behavior to the point where it is used in planning

is also noted by Kohlberg et al. (1968). In their developmental hierarchy, the category of private speech called "Describing own activity" is a part of Level II, whereas "Self-guiding comments" are found as a part of a developmentally higher stage (Level III).

As we shall see, private speech does not have to reach its most mature level to be abbreviated in the way Vygotsky proposed. Even when it is still at the level of describing one's own behavior and has not yet taken on a truly directive function, it may consist of abbreviated utterances. Furthermore, even at this early stage the principles of abbreviation are similar to the given-new distinction outlined above in connection with social speech.

There are two things to keep in mind when analyzing this early form of private speech. First, it does not seem to be intended to be social. The child can often be playing by himself and not be addressing his descriptive remarks to anyone else. Indeed, he may be so thoroughly engaged in acting and speaking that he will not notice social speech addressed to him.[5] This means that we would not want to analyze the given-new organization in the child's private speech on the basis of a speaker's input to a listener as Chafe is able to do in the case of social speech. If we cannot look to social communication factors as a basis for analyzing the given-new organization of private speech, where are we to look? The second fact about early forms of private speech gives us a clue here. This second fact is that in its early stages private speech is inextricably linked with the child's action. Saying that it describes one's own behavior is somewhat misleading since it indicates that there is behavior on the one hand and an optional description of it on the other. Rather, it is the case that speech and

behavior seem to be bound together as two aspects of a single phenomenon at the early stages of private speech.

We are now left with two facts about early forms of private speech that can lead us to a new basis for analyzing its given-new organization. On the one hand, since there is no interlocutor involved, we hardly want to say that the given-new organization of private speech is based on the factors Chafe has outlined. On the other hand, the early forms of private speech are inextricably bound up with the child's action. Therefore, it is logical to examine how the child's action could influence the given-new organization of private speech. It is this close relationship between action and private speech that should be at the heart of our explanation.

The private speech data to be used in this analysis come from two two-year-olds who were putting a puzzle together.[6] The puzzle contained animal figures and was to be constructed in accordance with a model that the experimenter gave the child. Each of the two children worked on this task alone. Some relevant segments of private speech that were recorded and transcribed were the following:

Child A: (5) Oh!
(6) And a horse, horsie. And a foot, and a foot, and a foot...
(7) Four cats. (Uninterpretable) And a dog, he goes here.

Child B: (8) Hmm? Oh wh-oh, me got duck. Snake. Snake. Brrreak.
(9) Puppy.
(10) Ta goo do. This snake, snake. Hey brak. Oh. Snake.
(11) Ooh. Waa. Owass. Eee-Eee. Ja open. Simmin. He go out. Hey monkey.

At first it may strike the reader that what we have here is a hodgepodge of uninterpretable and accidental utterances. No doubt the factor of interest to us here was only one of several that influenced the speech in these cases.

For example, these private speech utterances contain several instances of what Kohlberg et al. (1968) called word play (e.g., (8) Snake. Snake. Brrreak.; (10) Ta goo do.; (11) Ooh. Waa. Owass. Eee-Eee).

However, for our purposes, it is important to note that many of the utterances are concerned with parts of the puzzle (e.g., (6) And a horse, horsie. And a foot, and a foot, and a foot...; (7) Four cats...And a dog, he goes here.; (8) Oh wh-oh, me got duck. Snake. Snake.; (9) Puppy.). In (7) we see that the child not only mentioned the piece of the puzzle, he also mentioned where it goes. The utterances of other children in this study also contained both the name of the piece and the place in the puzzle frame into which it will fit. As we shall presently see, the important point is that the child may drop the name of the position in the puzzle frame into which a piece was to go, but he does not drop the name of the piece.

In analyzing the surface form of private speech, one can expect to find certain parts of the utterance dropped as outlined above, but it is more difficult to make predications about other forms of attenuation as Chafe did in the case of social speech. This is so because children's private speech utterances are often concerned with objects in the speech situation. In such cases, it is possible to use what Jakobson (1957) calls "shifters." These are often in the form of pronouns which are not used to refer to information that is given in the listener's consciousness as in social speech. Rather, they are used to refer to some object which is in the actual physical context of the private speech situation. For example, we could expect to see utterances such as the following in private speech:"This one goes in this place, and now this one."

The private speech of these two-year-olds undoubtedly reflects an early

stage in the development of private speech. That is, it is more concerned with describing and naming certain aspects of the action and environment than with planning and directing action.

We are now in a position to begin to see that with regard to the analysis of these samples of private speech: a) it has a given-new information organization based on what is already present and what is introduced into the child's consciousness, and b) this organization is based on the child's action.

In the case of completing a puzzle, we can see that the action, as well as the private speech, has a sort of given-new organization. Putting together a puzzle involves carrying out the same basic action on several different objects - the pieces. In the case of each piece the child must select it and then put it in its position in the puzzle frame. Of course the process can be much more difficult with, say, a complex jigsaw puzzle, but in the case of the materials used here, it was possible to select a piece first and then look for its proper placement. There was no need to identify what piece would be needed to complete the next step in a complex plan before making a selection. The process of completing puzzles was a familiar one for the two-year-olds in this analysis. For this particular puzzle, there was no need for the experimenter to do anything beyond presenting the materials and saying that the child could make the puzzle. No explanation of the type of action necessary for carrying out the task was necessary. In such a case, we can assume that when presented with the materials, the type of action required is in the consciousness of the child and should be associated with the given information in the private speech utterance. The unfamiliar aspect of the task is concerned with the particular materials used. This is the new information introduced into the child's

consciousness and is treated as such in the private speech utterances. In this case we are not dealing with one individual (the speaker) introducing new information into the consciousness of another (the listener). Rather, we are dealing with how the structure of a task carried out by one person involves given information and how it causes new information to be introduced into the child's consciousness. Usually, the only part of the situation vocalized in private speech is that part concerned with new information. The given information often is attenuated to the point of being dropped entirely from the child's utterance.

It is important to note that while it is true that what is vocalized as new information is connected with external objects, it is not these objects in and of themselves that determine what is new information. Rather, we can only identify new information on the basis of how objects fit into a goal-directed action. In principle, it should be possible to use similar objects in a different action in such a way that the organization of given and new information would be changed (perhaps reversed) and the child's private speech utterances would reflect this. This would be done by changing the goal and hence the action.

For example, let us assume that one puzzle piece could fit into some, but not all, of several different puzzle frames. If the child's goal was to identify those frames into which the piece fits, we would expect him to try to carry out the action with the various frames. In this case, information about the piece to be used would be in the child's consciousness before beginning to carry out the action, and information about the puzzle frames into which it would or would not fit would be introduced into consciousness as the child attended to the various possibilities. Accordingly, we would expect the child's private speech to reflect this. The given information would now be concerned

with the piece involved, and the new information would be concerned with the puzzle frames. We would not expect the content expressed in private speech to be about the piece here as was the case with the utterances we examined above. Rather, we would expect little or no mention of the piece involved and the verbalization to be about where the piece fits. For example, if we had puzzle frames of different colors, we might expect to hear private speech utterances like: "The green one." or "Now the red one." as opposed to the utterances about the pieces as in the first task. In both tasks we are not claiming that the part of an utterance concerned with given information will always be neatly deleted and the part concerned with new information will remain. Rather, the claim is that if any part is deleted, it will be that segment concerned with given information. In some cases it may remain, and in some cases, there may be no verbalization at all. We are a long way from being in a position where we can predict all aspects of a private speech utterance on the basis of an action.

What our analysis of this alternative task situation indicates is that if we say that the given-new organization of private speech is determined by the child's action, we really are talking about the action involved and not the objects used in it. There is nothing about the objects when considered apart from the goal-directed action in which they are embedded that can tell us which aspect of a situation will be concerned with given information and which aspect will be concerned with new informaiton. This notion of an action has not played a very important role in American psychology, but it turns out to be an integral part of many analyses we may eventually want to make.

We can now ammend our definition of given and new information in private

speech to read as follows:

> In the case of private speech, given information is that knowledge that is in the speaker's consciousness at the time of the utterance. So-called new information is what is being introduced into the speaker's consciousness as a result of the action he is carrying out.

In should not be assumed that we are here claiming that the child consciously realizes what is given and new. It may be possible for an observer to determine the given-new organization of information on the basis of the structure of the task involved and the child's verbalization, but this guarantees nothing about the child's awareness. This is also true of the given-new distribution of information in social speech.

The nature of the action being carried out in the young child's play will often be determined by the type of objects he is using, and these objects are often games or tasks which have been developed by adults over a period of many years. This fact raises the question (not be be discussed here) of how cultural games have evolved and how they guide the child's action.

It is obvious that a great deal of research remains to be done in the area of private speech. Usually, studies in the past have been concerned with whether or not private speech occurs in children at certain developmental levels and under certain conditions. Little has been done in the way of examining its form and content. If, as Vygotsky proposed, it is a sign system involved in planning and guiding actions, it would be very useful to know more about the factors that allow it to fulfill this function. In particular, we need to know more about the rules for its abbreviation. Although the ideas developed here about this abbreviation may eventually need to be revised, there is every reason to suspect that private speech has a given-new organization and that this organization can provide clues about the ways in which it can fulfill its

function.

One of the most important problems for investigators of private speech has to do with how it develops. It should not be viewed as a single, undifferentiated phenomenon that appears and remains in one form. Rather, from a structural point of view it undoubtedly passes through a developmental hierarchy. By understanding the stages in this development, we shall be in a better position to understand not only the speech involved but also the nature of the cognitive processes it accompanies and then guides. Furthermore, we should not overlook the possibility that certain aspects in the development of private speech influence other areas of language development. It would be very strange indeed if private speech were a separate function that had no influence on the development of social speech.

These issues and many more will arise as we continue our investigations in these areas. It is hoped that the present analysis will help clarify some of the theoretical foundations upon which future studies can be based.

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NOTES

1. The term "private speech" will be used here rather than "egocentric speech" (Vygotsky's term). By using the term "private speech" rather than "egocentric speech" we hope to avoid confusing it with speech that is intended to be used in communication but is egocentric. Also, for the purposes of this paper, "private speech" will not be used for inner speech. The term is only concerned with vocalized speech.

2. While inner speech is not directly observable, Vygotsky's notions on this topic have had a strong influence in the USSR on psycholinguistics (e.g., A.A. Leont'ev 1969) and neurolinguistics (e.g., Akhutina 1974, Luria 1975). It is included as a theoretical construct in many models of speech production and comprehension.

3. As Chafe has pointed out, the term "new" is often misleading since it implies that the listener has never had access to the information. Actually, it is concerned with information that is being introduced into the speaker's consciousness. In some cases the listener may have had access to the information before. The point is that it is being reintroduced into his consciousness in a particular speech context, and that is why we are calling it "new." Due to the widespread acceptance of this term, we will use it here, but Chafe suggests a better description is "newly activated."

4. It should be noted that it is not necessarily the case that the entire grammatical subject or the entire grammatical predicate serves as either the given or new information. It is often the case that parts of the grammatical subject or predicate will serve as new information, etc. Space does not permit going into all of the many possibilities here.

5. Of course as Vygotsky pointed out, the incidence of all forms of private speech will be much greater when the child is in a context where social communication is possible. This is because private speech develops out of social speech and is not yet completely separated from it. The two function are confused by the child at this point.

6. The author is grateful to Karen Fuson whose data are used in this paper.